Attorney's Docket No.: 16459-006001 / LD-4

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Alexei A. Erchak et al.

Art Unit : Unknown

Serial No.: 10/723,987

Examiner: Unknown

Filed

: November 26, 2003

Title

: LIGHT EMITTING DIODES

Mail Stop Amendment Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Copies of the non-patent references listed on the attached form PTO-1449 are enclosed. Applicants also bring to the Examiner's attention the below listed 14 pending U.S. utility patent applications that are owned by the Assignee of the above-noted patent application.

Document Number	Patentee	Filing Date
10/724,004	Alexei A. Erchak	11/26/03
10/724,033	Alexei A. Erchak	11/26/03
10/724,006	Alexei A. Erchak	11/26/03
10/724,029	Alexei A. Erchak	11/26/03
10/724,015	Alexei A. Erchak	11/26/03
10/724,005	Alexei A. Erchak	11/26/03
10/735,498	Alexei A. Erchak	12/12/03
10/794,244	Alexei A. Erchak	3/5/04
10/794,452	Alexei A. Erchak	3/5/04
10/872,335	Alexei A. Erchak et al.	6/18/04
10/896,606	Alexei A. Erchak et al.	7/22/04
10/871,877	Alexei A. Erchak et al	6/18/04
10/872,336	Alexei A. Erchak et al.	6/18/04
10/896,435	Alexei A. Erchak et al.	7/22/04

This statement is being filed after a first Office action on the merits, but before receipt of a final Office action or a Notice of Allowance. A check for \$180 in payment of the late

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Applicant: Alexei A. Erchak et al.

Serial No.: 10/723,987

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Page:

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submission fee of §1.17(p) is enclosed. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Attorney's Docket No.: 16459-006001 / LD-4

Date: 9/27/

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U.S. Department of Commerce Patent and Trademark Office

Attorney's Docket No. 16459-006001

Application No. 10/723,987

Information Discressure Statement by Applicant (Use several sheets if necessary)

Applicant Alexei A. Erchak et al.

Filing Date

Group Art Unit

(37 CFR §1.98(b))

November 26, 2003

U.S. Patent Documents							
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	5,359,345	10/25/94	Hunter et al.			
	AB	5,631,190	05/20/97	Negley et al.			
	AC	5,724,062	03/03/98	Hunter et al.			
	AD	5,799,924	07/14/98	Krames et al.			
	AE	5,955,749	09/21/99	Joannopoulos et al.			
	AF	6,071,795	06/06/00	Cheung et al.			
	AG	6,420,242	07/16/02	Cheung et al.			
	AH	6,559,075	05/06/03	Kelly et al.			
	AI	6,410,942	06/25/02	Thibeault et al.			
	AJ	6,657,236	12/02/03	Thibeault et al.			
	AK	2003/0141507	07/31/03	Krames et al.		,	·
	AL	5,633,527	05/27/1997	Lear			02/06/95
	AM	5,363,009	11/8/1994	Monto		. 0	08/10/92
	AN	5,073,041	12/17/1991	Rastani .	766		11/13/90
	AO	5,426,657	06/20/1995	Vakhsoori			05/27/94

	Foreign Patent Documents or Published Foreign Patent Applications							
Examiner	Desig.	Document	Publication	Country or			Trans	lation
Initial	ID	Number	Date	Patent Office	Class	Subclass	Yes	No
•	AP	WO 98/14986	04/09/98	PCT				

	Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner	Desig.		
Initial	ID	Document	
,	AQ	W.S. Wong et al. "Damage-free separation of GaN thin films from sapphire substrates", Appl. Phys. Lett. 72 (5), February 2, 1998, pages 599-601	
AR M.K. Kelly et al. "Optical process for liftoff of Group III-nitride films", Physica Status Sol Research Note, November 28, 1996, 2 pages.		M.K. Kelly et al. "Optical process for liftoff of Group III-nitride films", Physica Status Solidi; Rapid Research Note, November 28, 1996, 2 pages.	
	AS	A. A. Erchak et al. "Enhanced coupling to vertical radiation using a two-dimensional photonic crystal in a semiconductor light-emitting diode", Appl. Phys. Lett. (78 (5), January 29, 2001, pages 563-565	

Examiner Signature	Date Considered			
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.				

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 16459-006001	Application No. 10/723,987
Information Disclo		Applicant Alexei A. Erchak et al.	
(Use several sheets if necessary) (37 CFR §1.98(b))		Filing Date November 26, 2003	Group Art Unit

Other Documents (include Author, Title, Date, and Place of Publication)				
Examiner Initial	Desig. ID	Document		
	АТ	P.L. Gourley et al. "Optical properties of two-dimensional photonic lattices fabricated as honeycomb nanostructures in compound semiconductors", Appl. Phys. Lett. 64(6), February 7, 1994, pages 687-689		
	AU	P.L. Gourley et al. "Optical Bloch waves in a semiconductor photonic lattice", Appl. Phys. Lett. 60 (22), June 1, 1992, pages 2714-2716		
	AV	J.R. Wendt et al. "Nanofabrication of photonic lattice structures in GaAs/AIGaAs", J.Vac. Sci. Technol. B 11(6), November/December 1993, pages 2637-2640		
	AW	M. Krames et al "Introduction to the Issue on High-Efficiency Light-Emitting Diodes", IEEE Journal on selected topic in quantum electronics, Vol. 8, No. 2 March/April 2002, pages 185-188		
	AX	K. Streubel et al "High Brightness AlGaInP Light-Emitting Diodes", IEEE Journal on selected topic in quantum electronics, Vol. 8, No. 2, March/April 2002, pages 321-332		
	AY	M. Okai et al. "Novel method to fabricate corrugation for a λ/4-shifted distributed feedback laser using a granting photomask", Appl. Phys. Lett. 55(5), July 31, 1989, pages 415-417		
	AZ	T.L. Koch et al. "1.55-µ InGaAsP distributed feedback vapor phase transported buried heterostructure lasers", Appl. Phys. Lett. 47 (1), July 1, 1985, pages 12-14		
	AAA	W.T. Tsang et al. "Semiconductor distributed feedback lasers with quantum well or superlattice grating for index or gain-coupled optical feedback", Appl. Phys. Lett. 60 (21), May 25 1992, pages 258-2582		
	ABB	M. Zelsmann et al. "Seventy-fold enhancement of light extraction from a defectless photonic crystal made on silicon-on-insulator", Appl. Phys. Lett. 83 (13), September 29, 2003, pages 2542-2544		
	ACC	M. Rattier et al. "Omnidirectional and compact guided light extraction from Archimedean photonic lattices", Appl. Phys. Lett. 83 (7), August 18, 2003, pages 1283-1285		
	ADD	YJ. Lee et al. "A high-extraction-efficiency nanopatterned organic light-emitting diode", Appl. Phys. Lett. 82(21), May 26, 2003, pages 3779-3781		
	AEE	I. Schnitzer et al. "30% external quantum efficiency from surface textured, thin-film light-emitting diodes", Appl. Phys. Lett. 63 (18), October 18, 1993, pages 2174-2176		
	AFF	M. Boroditsky et al. "Light extraction from optically pumped light-emitting diode by thin-slab photonic crystals", Appl. Phys. Lett. 75 (8), August 23, 1999, pages 1036-1038		
	AGG	L. Chen et al. "Fabrication of 50-100 nm Patterned InGaN Blue Light Emitting Heterostructures", Phys. Stat. Sol. (a), 188 (1), 2001, pages 135-138.		
	АНН	I. Bulu et al. "Highly directive radiation from sources embedded inside photonic crystals", Appl. Phys. Lett. 83 (16), October 20, 2003, pages 3263-3265		
	AII	T. N. Oder et al. "III-nitride photonic crystals", Appl. Phys. Lett. 83 (6), August 11, 2003, pages 1231-1233		
	AJJ	M.K. Kelly et al. "Optical patterning of GaN films", Appl. Phys. Lett 68 (12), September 16, 1996, pages 1749-1751		

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